CLAIMS:

1. A multi-piece solid golf ball comprising a solid core and a cover of two inner and outer layers surrounding the core, the outer cover layer having a surface formed with a plurality of dimples, characterized in that

a product of the Shore D hardness of said inner cover layer multiplied by the Shore D hardness of said outer cover layer and a proportion V_R (%) of the total of the volumes of dimple spaces each defined below a plane circumscribed by the dimple edge to the overall volume of a phantom sphere given on the assumption that the golf ball surface is free of dimples satisfy any one of the following combinations (1) to (5):

(1) the product of Shore D hardnesses of inner and outer cover layers: 1,500 to less than 2,000

V_R: 0.8 to 1.1%

(2) the product of Shore D hardnesses of inner and outer cover layers: 2,000 to less than 2,500

V_R: 0.75 to 1.05%

(3) the product of Shore D hardnesses of inner and outer cover layers: 2,500 to less than 3,000

V_R: 0.7 to 1%

(4) the product of Shore D hardnesses of inner and outer cover layers: 3,000 to less than 3,500

V_R: 0.65 to 0.95%

(5) the product of Shore D hardnesses of inner and outer cover layers: 3,500 to 4,000

V_R: 0.6 to 0.9%,

and said dimples include at least three types of dimples which are different in at least one of a diameter, a depth, and a value V_0 which is the volume of one dimple space defined below a plane circumscribed by the dimple edge divided by the volume of a cylinder whose bottom is the plane and whose height is the maximum depth of the dimple from the bottom.

2. The multi-piece solid golf ball of claim 1 wherein the solid core has a distortion of 2.6 to 6.5 mm under an applied load of 100 kg.

3. The multi-piece solid golf ball of claim 1 or 2 wherein both the hardnesses of the inner and outer cover layers are up to 63 in Shore D hardness.